

# SOLARWINDS

## Enterprise Operations Console Administrator Guide

solarwinds  
*Unexpected Simplicity*



# **SolarWinds**

Enterprise Operations Console

Administrator Guide

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## Enterprise Operations Console Administrator Guide

### About SolarWinds

SolarWinds, Inc develops and markets an array of network management, monitoring, and discovery tools to meet the diverse requirements of today's network management and consulting professionals. SolarWinds products continue to set benchmarks for quality and performance and have positioned the company as the leader in network management and discovery technology. The SolarWinds customer base includes over 45 percent of the Fortune 500 and customers from over 90 countries. Our global business partner distributor network exceeds 100 distributors and resellers.

### Contacting SolarWinds

You can contact SolarWinds in a number of ways, including the following:

Team	Contact Information
Sales	1.866.530.8100 <a href="http://www.solarwinds.com/">www.solarwinds.com/</a>
Technical Support	<a href="http://www.solarwinds.com/support">www.solarwinds.com/support</a> (You need a customer account to access the Customer Support area of the website.)
User Forums	<a href="http://thwack.solarwinds.com">thwack.solarwinds.com</a>

## Conventions

The documentation uses consistent conventions to help you identify items throughout the printed and online library.

Convention	Specifying
Bold	Window items, including buttons and fields
Italics	Book and CD titles, variable names, new terms
<b>Fixed font</b>	File and directory names, commands and code examples, text typed by you
Straight brackets, as in [value]	Optional command parameters
Curly braces, as in {value}	Required command parameters
Logical OR, as in value1 value2	Exclusive command parameters where only one of the options can be specified

## SolarWinds Documentation Library

The following documents are included in the SolarWinds Enterprise Operations Console documentation library:

Document	Purpose
Administrator Guide	Provides detailed setup, configuration, and conceptual information.
Page Help	Provides help for every window in the Enterprise Operations Console user interface.
Release Notes	Provides late-breaking information, known issues, and updates. The latest Release Notes can be found at <a href="http://www.solarwinds.com">http://www.solarwinds.com</a> .

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## Chapter 1: Introduction

SolarWinds Enterprise Operations Console (SolarWinds EOC) collects network performance data from an installed base of SolarWinds servers, and summarizes this data into a composite, centralized network performance view.

SolarWinds EOC can collect data from these SolarWinds products:

- SolarWinds IPAM version 1.7.1 and later
- SolarWinds VNQM (formerly IP SLA) version 3.1 and later
- SolarWinds NCM integration module version 5.5.2 to 6.1
- SolarWinds NCM version 7.0 and later
- SolarWinds NPM version 9.5 SP5 and later
- SolarWinds NTA version 3.6 and later
- SolarWinds SAM (formerly APM) version 2.5 and later
- SolarWinds UDT version 2.0 and later

### Why Install SolarWinds EOC

SolarWinds EOC offers network engineers a single consolidated command center to monitor their entire enterprise network using remote SolarWinds server deployments. Network engineers responsible for monitoring enterprise-wide network performance for the company need to proactively maintain network stability and instantly respond to any network issues, even if those issues occur at remote locations.

#### Point-and-Click Setup

After deploying SolarWinds servers across your network in remote locations, SolarWinds EOC can be installed and configured in a matter of minutes. Unlike complex enterprise management solutions, SolarWinds EOC deployment requires no consultants.

### **WAN-Optimized Architecture**

Enable network growth by monitoring several-hundred-thousand-element networks using dozens of remote SolarWinds server deployments running simultaneously without affecting WAN performance.

In this manner, SolarWinds EOC ensures that network resources are correctly utilized to optimally deliver business services across enterprise-wide, geographically-distributed networks.

## **How SolarWinds EOC Works**

SolarWinds EOC aggregates the current status of your SolarWinds servers and presents this data in the SolarWinds EOC Web Console. Administrators can restrict what SolarWinds data each SolarWinds EOC user is permitted to see. These restrictions can be set on an individual basis by customizing user settings and on a group basis by defining roles.

Some example restrictions include the following:

- Restricting non-administrator roles from viewing Netflow data.
- Limiting the network nodes and events that users with restricted access may see.



## Chapter 2: Installing SolarWinds EOC

Install SolarWinds EOC on a server that meets or exceeds the minimum requirements.

### Requirements

The following table provides the minimum requirements for an SolarWinds EOC installation:

For evaluation purposes, you may install SolarWinds EOC on Microsoft Windows Vista SP1 or Windows 7 in a test environment. However, SolarWinds does not support SolarWinds EOC installed on these operating systems in a production environment.

Software/Hardware	Requirements
Operating System	32-bit or 64-bit Microsoft Windows Server 2003, Windows Server 2008 (including R2), or Windows Server 2012 (including R2).
Web Server	Microsoft IIS 6.0 or later. DNS specifications require that hostnames be composed of alphanumeric characters ( <b>A-Z, 0-9</b> ), the minus sign (-), and periods (.). Underscore characters ( <b>_</b> ) are not allowed. For more information, see RFC 952.
.NET Framework	Version 4.0 or later
CPU Speed	3.0 GHz
Memory	2 GB
Hard Drive Space	750 MB
Network Speed	100 Mbit/s between SolarWinds EOC and SQL Server
SQL Server	SolarWinds Enterprise Operations Console supports the following versions, with latest service packs:

	<ul style="list-style-type: none"> <li>• SQL Server 2005 Express, Standard, or Enterprise</li> <li>• SQL Server 2008 Express, Standard, or Enterprise</li> <li>• SQL Server 2008 R2 Express, Standard or Enterprise</li> <li>• SQL Server 2012 SP1 Express, Standard or Enterprise</li> </ul> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Either mixed-mode or SQL authentication must be supported</li> <li>• .NET is not required if your database is on a separate server.</li> <li>• Use the following database select statement to check your SQL Server version, select pack or release level, and edition:</li> </ul> <p>Select SERVERPROPERTY ('productversion'), SERVERPROPERTY ('productlevel'), SERVERPROPERTY ('edition')</p>
SQL Server Collation	<p>English with collation setting SQL_Latin1_General_CP1_CI_AS</p> <p>English with collation setting SQL_Latin1_General_CP1_CS_AS</p> <p>German with collation setting German_PhoneBook_CI_AS</p> <p>Japanese with collation setting Japanese_CI_AS</p> <p>Simplified Chinese with collation setting Chinese_PRC_CI_AS</p>
SQL Server Memory	SolarWinds recommends a minimum of 4GB of RAM
Ports	<p>SolarWinds Information Service Protocol uses port 17777/tcp.</p> <p>SolarWinds EOC Web Console typically uses port 80/tcp.</p>

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Recovery Model	Simple
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## EOC Scalability

Please note that the [Requirements](#) stated earlier are the minimal requirements recommended for EOC. Scalability testing has been performed against EOC. The test involved using two servers. One server hosted EOC and the second server was used to run the MSSQL database. Hardware configuration for both servers consisted of a quad core processor with 8GB of RAM. The EOC server was on a virtual machine while SQL resided on a physical server. Testing confirmed that EOC was able to poll data from more than 30 Orion servers if the TOTAL amount of elements (nodes, interfaces, and volumes) was between 600,000 and 1 million elements. The polling interval for scalability testing was set to 10 minutes.

## Port and Firewall Information

SolarWinds EOC communicates with SolarWinds servers through the SolarWinds Information Service protocol over TCP port 17777. Any firewalls between SolarWinds EOC and other SolarWinds servers must have TCP port 17777 open to both inbound and outbound traffic.

To access the SolarWinds EOC Web Console, you must allow TCP traffic on the web site port that you configured in the Config Wizard. Typically, this is port 80.

## Deployment Best Practices

Follow these guidelines to help establish the optimum software and hardware configuration for deploying SolarWinds EOC in your monitoring environment.

### Best deployment practice

Install SolarWinds EOC on its own server. Provide at least 100Mbit/s of network connectivity between SolarWinds EOC and the SQL Server. For optimal performance, allow at least 1Mbit/s of bandwidth between SolarWinds EOC and each SolarWinds server you are monitoring.

### Hardware-constrained deployments

If you do not have a dedicated server for SolarWinds EOC, you may decide to install SolarWinds EOC on the same server as an existing SolarWinds product or

on the server hosting SQL. Install SolarWinds EOC on whichever server has the most CPU power and the largest amount of RAM.

If the two servers are equal in CPU and memory, it is better to install SolarWinds EOC on the same server as an existing SolarWinds product.

SolarWinds EOC cannot be installed on a server running SolarWinds NPM version 10.0 or earlier.

### **Bandwidth considerations**

Large SolarWinds deployments (monitoring 10,000 - 100,000 nodes across 5 to 30 SolarWinds servers) can require an aggregate of 15 - 60 GB of daily data transfer between SolarWinds EOC and the SolarWinds servers you are monitoring, and 10 – 40 GB of daily data transfer between SolarWinds EOC and the SQL Server.

## **Installing SolarWinds EOC**

SolarWinds EOC is installed on your web server, providing a Web Console and collection service that polls data from your SolarWinds servers.

To install SolarWinds EOC:

1. Log on with an administrator account to the server on which you want to install SolarWinds EOC.
2. Run the **SolarWinds-EOC-v1.6.exe** installer program.
3. Accept the terms in the License Agreement, and then continue to follow the instructions given to you in the installer.

## **Configuring SolarWinds EOC**

After you install SolarWinds EOC, the Configuration Wizard starts automatically.

To configure SolarWinds EOC:

1. Click **Next** to proceed.
2. Specify the SQL Server instance you want to use to store SolarWinds EOC data and any required credentials to log onto the instance, and then click **Next**.

An example SQL Server instance name is:

**(local)\SQLEXPRESS**

3. Create a new database named **EOC**, and then click **Next**.
4. Select or create a SQL Server account to access the database, and then click **Next**.
5. **If you want to deploy the SolarWinds EOC web console as a new web site**, click **Create a new website**, type the IP address and port, and then click **Next**.
  - If you are installing SolarWinds EOC on the same server as another SolarWinds product, you must choose a different port than the one already assigned to its existing web site.
6. **If you want to deploy the SolarWinds EOC web console as a virtual directory within an existing website**, complete the following procedure:
  - a. Click **Create a virtual directory**.
  - b. From the **Existing Website** list, select the website.
  - c. In the **Virtual Directory Name** box, enter the name of the virtual directory.
  - d. Click **Next**

You may not deploy the SolarWinds EOC web console as a virtual directory within an existing SolarWinds product website.
7. Specify a Windows account to use as a SolarWinds EOC administrator, and then click **Next**.
8. Review the configuration summary, and then click **Next**.
9. After the configuration has finished, click **Finish**.

## Configuring the Web Site for HTTPS (optional)



You are the website administrator for your company and you are responsible for the EOC website. Your manager has made it company policy to allow HTTPS connections to the EOC website for security reasons.

To improve the privacy and security of your SolarWinds EOC web site, you can configure your Internet Information Service to accept HTTPS/SSL connections. This process differs between Windows Server 2003 and Windows Server 2008. Complete the procedure below that is relevant to your environment.

Obtaining and installing SSL certificates is beyond the scope of this document. For more information, see <http://support.microsoft.com/kb/298805>.

### **To allow HTTPS connections to the SolarWinds EOC web site in Windows Server 2003:**

1. Log on as an administrator to your SolarWinds EOC server.
2. Click **Start > Control Panel > Administrative Tools > Computer Management**.
3. Expand **Services and Applications > Internet Information Services (IIS) Manager > Web Sites**.
4. Click **SolarWinds EOC** and then click **Action > Properties**.
5. Click the **Web Site** tab.
6. Confirm that **SSL port** is set to **443**.
7. Click **Advanced**.
8. **If the Multiple SSL identities for this Web site field does not list the IP address for the SolarWinds Web Console with SSL port 443**, complete the following steps:
  - a. Click **Add** and then select the **IP address** of the SolarWinds Web Console.
    - As it was set initially in the Configuration Wizard, this option is usually set to **(All Unassigned)**. If the IP address of the SolarWinds Web Console was not initially set to (All Unassigned), select the actual, configured IP address of the SolarWinds Web Console.

- b. Type **443** as the **TCP port**, and then click **OK**.
9. ***If you want to accept only HTTPS connections***, complete the following steps:
  - a. Click the **Directory Security** tab.
  - b. Click **Edit** in the Secure communications section.
  - c. Select **Require secure channel (SSL)**.
  - d. Select Accept client certificates in the Client certificates area.
  - e. Click **OK** on the Secure Communications window.
10. Click **Apply** and then click **OK** to exit.

**To enable SSL Connections to the SolarWinds EOC web site in Windows Server 2008:**

1. Log on as an administrator to your SolarWinds EOC server.
2. Click **Start > Administrative Tools > Internet Information Services (IIS) Manager**.
3. In the Connections pane, expand the name of your SolarWinds EOC server, and then expand **Sites**.
4. Select your SolarWinds EOC web site, and then click **Bindings** in the Actions pane on the right.
5. Click **Add** in the Site Bindings window.
6. In the **Type** field, select **https**, and then confirm that the **Port** value is **443**.
7. In the **SSL Certificate** field, select a certificate, and then click **OK**.
8. Click **Close** on the Site Bindings window.
9. In the center pane, double-click **SSL Settings** in the IIS group.
10. Select **Require SSL**, and then click **Apply** in the Actions pane on the right.
11. In the Connections pane, select your SolarWinds EOC web site.
12. Click **Restart** in the Manage Web Site group on the right.

## Moving SolarWinds EOC to a New Server

SolarWinds EOC encrypts your sensitive data with a security certificate stored on the original SolarWinds EOC server. If you do not replicate the original certificate, SolarWinds EOC on the new server cannot access any credentials, and all polling will fail.

To grant the new server access to this encrypted data:

1. Export the certificate from the original server.
  - a. On the Start Menu, click **Run**, type **MMC**, and then click **OK**.
  - b. On the **File** menu, click **Add/Remove Snapin**, and then click **Add**.
  - c. Select **Certificates**, and then click **Add**.
  - d. Select **Computer account**, and then click **Next**.
  - e. Select **Local computer**, and then click **Finish**.
  - f. Click **Close**.
  - g. Click **OK**.
  - h. Expand the **Certificates (Local Computer)** group.
  - i. Expand the **Personal** group.
  - j. Expand the **Certificates** group.
  - k. Right-click **SolarWinds EOC**, point to **All Tasks** on the shortcut menu, and then click **Export**.
  - l. Click **Next** in the Certificate Export Wizard.
  - m. Select **Yes**, export the private key, click **Next**, and then click **Next** again.
  - n. Type and confirm a password for this private key, and then click **Next**.
  - o. Specify the file name to which you want to save the certificate, click **Next**, and then click **Finish**—the certificate is saved with a .pfx file name extension.
  
2. Import the certificate to the new computer.

- a. Copy the .pfx certificate file to the new computer.
  - b. On the Start Menu, click **Run**, type **MMC**, and then click **OK**.
  - c. On the **File** menu, click **Add/Remove Snapin**, and then click **Add**.
  - d. Select **Certificates**, and then click **Add**.
  - e. Select **Computer account**, and then click **Next**.
  - f. Select **Local computer**, and then click **Finish**.
  - g. Click **Close**.
  - h. Click **OK**.
  - i. Expand the **Certificates (Local Computer)** group.
  - j. Expand the **Personal** group.
  - k. Expand the **Certificates** group.
  - l. *If there is a SolarWinds EOC item in the list*, right-click **SolarWinds EOC**, and then click **Delete** on the shortcut menu.
  - m. Right-click the Certificates—Personal—Certificates node, point to **All Tasks** in the shortcut menu, and then click **Import**.
  - n. Click **Next** in the Certificate Import Wizard.
  - o. Specify the .pfx certificate file you copied to the server, and then click **Next**.
  - p. Enter the password for the private key, select **Mark this key as exportable**, and then click **Next**.
  - q. Select **Place all certificates in the following store**, and then select **Personal** as the Certificate Store.
  - r. Click **Next**, and then click **Finish**.
3. Copy the Authorization Manager file to the new computer.
    - a. Locate the **Az\_databaseInfo.xml** file in the **Website\App\_Data** folder of the original SolarWinds EOC

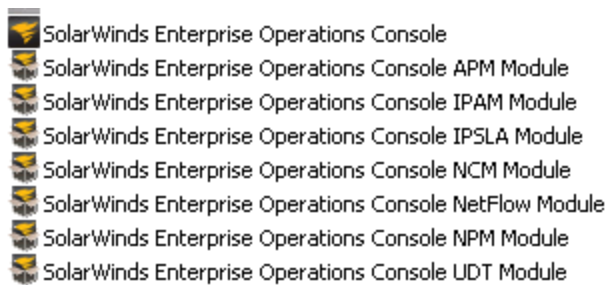
server. Typically, it is located in **C:\Program Files\SolarWinds\EOC\Website\App\_Data**.

b. Copy the .xml file to the **Website/App\_data** folder of the new SolarWinds EOC server. Typically, this is **C:\Program Files\SolarWinds\EOC\Website\App\_Data**.

4. Rerun the EOC Configuration Wizard to reconfigure the database on the new computer.
  - a. Start **SolarWinds EOC Configuration Wizard** in the **SolarWinds Enterprise Operations Console** program group.
  - b. Select **Database**, and then click **Next**.
  - c. Click **Next** on the wizard dialog boxes until the SolarWinds EOC Configuration Wizard has repaired the database.
  - d. Click **Finish**.

## Migrating EOC to a Different Drive on the Same Server

When you initially install EOC, it will also install Orion modules.



When migrating EOC to a different drive, you must uninstall “SolarWinds Enterprise Operations Console” and all EOC modules before re installing EOC to a different drive.

## FIPS Support

FIPS (Federal Information Processing Standard) defines security and interoperability standards for computers used by the U.S. Federal Government.

EOC is FIPS 140-2 compliant. For instructions on enabling FIPS see, "[Enabling FIPS](#)."



## Chapter 3: Administrating the SolarWinds EOC Web Console

The web console displays data and event logs collected from the SolarWinds servers. If you are the administrator for SolarWinds EOC, ensure you review the following sections:

- "Logging on for the First Time"
- "Adding SolarWinds Servers"
- "Adding SolarWinds NCM Servers (version 6.1 and earlier)"
- "Setting Up User Accounts and Roles"
- "Creating and Managing Views"
- "Customizing Menu Bars"
- "Setting EOC Warning and Error Threshold Values"
- "Customizing the Web Console Banner"
- "Setting the Web Console Refresh Rate"
- "Viewing Installation Details"
- "Viewing Notifications"

### Logging on for the First Time

Complete the following procedure in a supported browser when initially accessing the SolarWinds EOC Web Console. SolarWinds EOC is compatible with the following Internet browsers:

- Microsoft Internet Explorer versions 7 and higher
- Mozilla Firefox versions 4 and higher
- Google Chrome versions 20 and higher
- Apple Safari Mobile

### Notes:

- There is a known compatibility issue with EOC and Internet Explorer 11. If you are using Internet Explorer 11 and having issues with how EOC is being displayed in your web browser, enable 'Enterprise Mode.' More information about enabling 'Enterprise Mode' can be seen [here](#).
- SolarWinds does not support administrative functions for SolarWinds EOC on Apple Safari Mobile.

### To log on to the SolarWinds EOC Web Console:

1. Log on to Windows using the Administrator account you specified during the configuration process.
2. Open a supported web browser.
3. Enter **http://ipAddressOrHostName[:port]**, where ipAddressOrHostName is the IP address or host name of your SolarWinds EOC server, and port is the web server port you specified in the Configuration Wizard.
  - The first time you run the SolarWinds EOC Web Console, you may experience a long pause after logging on. This pause is a one-time initialization phase and is normal.
  - When you are logged on to the Web Console as an administrator, the Settings option is available at the top-right of the SolarWinds EOC Web Console. The Settings page presents a wide variety of tools to control the appearance and delivery of information to SolarWinds EOC users.

## Adding SolarWinds Servers

The following procedure provides the steps that are required to add SolarWinds servers to SolarWinds EOC. This procedure applies to the following SolarWinds products:

- IP Address Manager (IPAM)
- Network Configuration Manager (NCM) version 7 and higher
- Network Performance Monitor (NPM)
- Server and Application Monitor (SAM, formerly APM)



- User Device Tracker (UDT)
- VoIP and Network Quality Manager (VNQM, formerly IP SLA)

The UTC system time of the SolarWinds servers you are connecting to must be within five minutes of the SolarWinds EOC server. For security reasons, SolarWinds EOC cannot communicate with SolarWinds servers that have a greater time difference.

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Add SolarWinds servers**.
4. Type a display name for this SolarWinds server in the **SolarWinds Server Name** field.

**Note:** This name is for display purposes only.

5. Type the IP address or host name of the SolarWinds server in the **IP address or host name** field:

**Notes:**

- SolarWinds EOC only supports SolarWinds servers with IPv4 addresses.
  - SolarWinds EOC only recognizes hostnames that follow standard DNS naming conventions, which require that hostnames be composed of alphanumeric characters (**A-Z, 0-9**), the minus sign (-), and periods (.). Underscore characters (\_) are not allowed.
6. Type the Uniform Resource Locator (URL) of the SolarWinds server Web Console in the **Website URL** field.
  7. Type a username and password with sufficient access to the SolarWinds server web console resources you want to monitor in the **SolarWinds Server credentials** section.

8. Specify how often you want SolarWinds EOC to poll this SolarWinds server in the **Polling Interval** box. The default interval value is 300 seconds.
9. In the **Enable Server** list, select **Yes, enable this server**.
10. Click **Test**.
11. **If the test fails**, correct the error reported in the error message bar, and then click **Test** again.
12. **If the test passes**, click **Add Server**.

### Adding SolarWinds NCM Servers (version 6.1 and earlier)

You cannot directly add SolarWinds NCM servers that are running version 6.1 or earlier to SolarWinds EOC. Instead, you install and configure the SolarWinds NCM integration module on a SolarWinds server and then add that server to SolarWinds EOC.

If you want to add your SolarWinds NCM server to SolarWinds EOC directly, upgrade NCM to version 7.0 or higher.

#### Software Requirements

- SolarWinds NCM and integration module version 5.5.2 to 6.1
- SolarWinds NPM version 9.5.1 or later

#### Credential Requirements

You must have correctly configured the SolarWinds NCM Integration module with a valid SolarWinds NCM server and a valid SolarWinds NCM credential.

The SolarWinds NPM credential you specify in SolarWinds EOC must not have any account limitations that would prevent access to the SolarWinds NCM integration module.

### Setting Up User Accounts and Roles

You must create a SolarWinds EOC account for each user who needs access to the EOC web console. This allows administrators to place restrictions on the SolarWinds EOC views and SolarWinds data each user is permitted to access.

Additionally, for each EOC user you must specify a SolarWinds server credential for the SolarWinds servers you give an EOC user access to. Specifying the SolarWinds server credentials allows SolarWinds EOC to honor that server's account limitations, showing the user only the data the credential is allowed to see.

Administrators can further restrict access to performance data by assigning users to a Role. Roles allow administrators to limit the SolarWinds EOC Views available to groups of users.

### Adding SolarWinds EOC User Accounts

SolarWinds EOC takes advantage of Windows Active Directory credential security. Users with a Windows credential on a domain accessible by the SolarWinds EOC server can be granted access to the SolarWinds EOC web console. Local accounts can also be granted access.

SolarWinds EOC does not work with users from untrusted domains. It is recommended that users are within a trusted domain.

#### **To add individual Windows user accounts as SolarWinds EOC users:**

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Add Accounts**.
4. Select **Windows individual account** and then click **Next**.
5. Locate the Windows account by following this procedure:

- a. Type the user name in the **User name to search for** field.

**Note:** If you do not know the exact user name, use \* as a wildcard to represent the unknown portions, for example: **\*Jimmy\***.

- b. **If this is a local account**, verify the local server name in the **Local Server or Domain Name** field.

- c. **If this is an Active Directory account**, type the domain name to which this account belongs in the **Local Server or**

**Domain Name** field and provide the appropriate domain credentials in the **Credentials to access domain** section.

d. Click **Search**.

6. Click **Select** for the account credential you want to add as a SolarWinds EOC user.
7. When you finish selecting individual accounts, click **Next**.
8. Select a role for the new user in the **Add to role** menu.
9. **If you selected New Role**, complete the form to create a new role.

**Note:** For more information, see "Defining and Assigning Roles" on page 29.

10. Click **Next**.
11. **If the settings for the new users are correct**, click Add Users.

### To add Windows group accounts as SolarWinds EOC users:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Add Accounts**.
4. Select **Windows group account** and then click **Next**.
5. Locate the Windows group by following this procedure:

a. Type the group name in the **Group name to search for** field

**Note:** If you do not know the exact group name, use \* as a wildcard to represent the unknown portions, for example: **\*admin\***

b. **If this is a local group**, verify the local server name in the **Local Server or Domain Name** field.

- c. *If this is an Active Directory group*, type the domain name to which this group belongs in the **Local Server or Domain Name** field and provide the appropriate domain credentials in the **Credentials to access domain** section.
- d. Click **Search**.

6. Click **Select** for the group you want to add as a SolarWinds EOC user.
7. When you finish selecting Windows groups, click **Next**.
8. Select a role for the new users in the **Add to role** menu.
9. *If you selected New Role*, complete the form to create a new role.

**Note:** For more information, see "Defining and Assigning Roles" on page 29.

10. Click **Next**.
11. *If the settings for the new users are correct*, click Add Group.

## Defining and Assigning Roles

Roles limit the SolarWinds EOC web console actions users are allowed to perform by restricting the SolarWinds EOC views they can access. Administrators can assign each user only one role.

SolarWinds EOC contains two pre-defined roles:

### Administrator

Users in this role have permission to access all the default views.

### Guest

Users in this role may access the Applications, Configs, Home, NetFlow, Thwack, Top 10, VoIP, and Wireless views.

### To define a new role:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Add Roles**.
4. Enter a name for this role in the **Role Name** field.

5. Enter a description for this role in the **Role Description** field.
6. Specify what menu bars to display for this role by selecting a default or custom menu bar from their respective lists.

For more information, see "Assigning a Menu Bar to a Role" on page 36.

7. Specify the order in which the **Home**, **Network**, and **Applications & Server** tabs will display for this role by selecting the tab name in the **Arrange the tabs in this order** box and clicking the arrows to the right.
8. Select the default homepage for this role in the **Set Default Homepage View** menu.
9. *If you want to allow users in this role to personalize their views*, select **Yes** next to **Allow Users to Personalize Pages**.
10. Select the views you want the users in this role to see by selecting the boxes in the Set Permissions for Page Views section.
11. Click **Add Role**.

### To assign a role to a user:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Manage Users**.
4. Select the user, and then click **Edit User**.
5. Select an appropriate role from the **Role** list.
6. Click **Update User**.

## Managing SolarWinds Server Credentials

The SolarWinds EOC Web Console enforces SolarWinds NPM account limitations, showing users only data their SolarWinds server credentials allow them to see. As an administrator, you can choose to manage the SolarWinds server credentials for each user, or you can allow your users to manage their own SolarWinds server credentials.

Users without assigned SolarWinds server credentials cannot see SolarWinds data in the EOC web console.

### **To manage SolarWinds server credentials for your users:**

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Manage Accounts**.
4. Select the appropriate user, and then click **Edit**.
5. For each SolarWinds server you want the user to access, complete the following procedure:
  - a. Select **Account is permitted to see data from this SolarWinds Server**.
  - b. Enter the user name for the SolarWinds server.
  - c. Enter the password for the SolarWinds server.
6. Click **Update User**.

### **To allow users to manage their own SolarWinds server credentials:**

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Manage Accounts**.
4. Select the appropriate user, and then click **Edit**.
5. Select **User can manage credentials for SolarWinds Servers** next to Who should manage SolarWinds Server credentials for this user?
6. Click **Update User**.

## **Allowing Automatic SolarWinds Server Web Site Logins**

If a user clicks on a node or other network resource for further analysis, SolarWinds EOC displays the appropriate page by connecting to the SolarWinds Web Console hosting the data. Users must log on to the SolarWinds Web

Console with valid credentials, but these credentials can be supplied by two ways:

- Users can manually enter their SolarWinds server credentials at the SolarWinds Web Console login page. This is the default setting.
- SolarWinds EOC can log on to the SolarWinds NPM web console automatically by appending the credential user name and password to the URL.

To allow automatic SolarWinds Web Console logins for all users:

1. Click **Settings**.
2. Click **Web Console Settings** in the Settings groups.
3. Set **Allow SolarWinds Server auto-login** to **Yes**.
4. Click **Submit**.

### Securing Automatic Logins with HTTPS

SolarWinds EOC does not encrypt the automatic login credentials appended to the URL. It is possible for an attacker to intercept your HTTP requests and obtain SolarWinds NPM credential information.

For this reason, we recommend you only allow automatic website logins if your SolarWinds servers are hosted on secure HTTPS web sites. The HTTPS protocol encrypts the URL string, making it more difficult for an attacker to compromise your security.

### Viewing SolarWinds Server Account Limitations

The SolarWinds EOC web console allows administrators to list, but not change, a SolarWinds server's account limitations. SolarWinds server account limitations are managed through the individual SolarWinds servers.

To list the SolarWinds server account limitations:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **View Account Limitations**.
4. Click the grouping method of your choice in the **Group By** list.



## Creating and Managing Views

Views are configurable presentations of network information. A view can include maps, charts, summary lists, reports, events, and links to other resources. As an administrator, you can assign views to menu bars, and customize each view. You may also select the charts and device properties that are displayed on each view.

### Creating New Views

You can begin customizing the SolarWinds EOC Web Console by creating new views. Complete the following procedure to create a new view.

To create a new view:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Add New View**.
4. Type a name and description for the view.
5. ***If you want to add the new view to the menu bar***, select **Add to menu bar**, and then select the roles that should have access to the new view.
6. ***If you want to add a resource***, click the **Resources** tab, and then repeat the following steps for each resource you want to add:
  - a. Click the category you want in the **Categories** list.
  - b. Click the appropriate resource.
  - c. Modify the form for the new resource that appears to the right.
  - d. Select the appropriate column from the **Add** menu at the bottom of the new resource form.
7. ***If you want to change the column layout of your view***, click the **Layout & Preview** tab, and then configure the column layout of your view as follows.
  - a. Click the layout type that you want in the **Predefined Layouts** list.

b. Drag the resources to arrange them as you want them to appear in the view.

8. ***If you have finished configuring your view***, click **OK, Save Changes**.

## Editing Existing Views

You can configure an existing view by completing the following procedure.

To edit an existing view:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Manage Views**.
4. Select the view you want to edit, and then click **Edit View**.
5. Complete the task as if creating a new view. For more information see "Creating New Views" on page 33.

## Adding User-Defined Links to a View

The User-Defined Links option may be used to create quick access to external websites or customized views. URLs of your customized views can be copied from their preview pages and pasted in a User-Defined Links field. The following steps enable user-defined links from within your Web Console.

To enable a user-defined links resource:

1. Create a new view or edit an existing view.

**Note:** For more information, see "Creating New Views" on page 33.

2. Click the **Resources** tab.
3. Click **User Links** under **Resource Name**.
4. ***If you do not want to use the default title provided***, enter a new **Title** for the links list.
5. ***If you want a subtitle***, enter a new **Subtitle** for the links list.

**Note:** Titles and subtitles may be entered as either text or HTML.

6. Enter the following information for each link you want to define:
  - a. A link **Name** and the **URL** of your link.
  - b. *If you want your links to open in a new browser window*, select **Open in New Window**.
7. Select the appropriate column from the **Add** menu at the bottom of the **User Links** resource form.
8. *If you have finished configuring your view*, click **OK, Save Changes**.

### Allowing and Removing View Personalizations

Administrators have the ability to allow users to personalize their views. These personalizations include filtering nodes and adding, deleting, and rearranging resources, and the permission to personalize views is granted by role. For more information, see "Defining and Assigning Roles" on page 29.

Administrators can remove all view personalizations by updating the related view. When updating a view, administrators can choose to apply layout and resource changes globally, and doing so overrides all personalizations made by any other users.

To remove personalizations from a view:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Manage Views**.
4. Select the view, and then click **Edit View**.
5. *If you want to remove layout personalizations*, select **Apply layout changes globally**.
6. *If you want to remove resource personalization*, select **Apply resource changes globally**.
7. Click **OK, Save Changes**.

## Customizing Menu Bars

Menu bars are displayed at the top of every page. As an administrator, you can create different menu bar configurations and make them conditional. Users in different roles see different menu bars.

### Creating a New Menu Bar

You can create new menu bars using the drag and drop Menu Bar interface. Complete the following procedure to create a new menu bar.

To create a new menu bar:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Add New Menu Bar**.
4. Type a name for the menu bar at the top of the form.
5. *If you want to add a menu item*, drag the menu item from the **Available items** column to the **Selected items** column.

**Note:** You cannot drag a menu item by its **Edit** button.

6. *If you want to change the order of menu items*, drag the menu item to a new location in the **Selected items** column.
7. *If you want to remove a menu item*, drag the menu item back to the **Available items** column.
8. *If you want to rename a menu item*, click **Edit** on the menu item.
9. *If you want to add a custom menu item*, click **Add**, and then complete the form for the custom menu item.
10. *If you have finished configuring your menu bar*, click **Submit**.

### Assigning a Menu Bar to a Role

Complete the following procedure to assign a menu bar to a role.

To assign a menu bar to a role:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.

3. Click **Manage Roles**.
4. Select the role, and then click **Edit Role**.
5. Under **Set Menu Bar and Tab Order Defaults**, select the menu bar from the menu under the appropriate tab heading.

**Note:** The only tabs that are available are **Home**, **Network**, and **Applications & Server**. Assigning a new menu bar to any of these tabs will replace the default menu bar.

6. Click **Update Role**.

## Setting EOC Warning and Error Threshold Values

Views contain resources that provide information on nodes that exceed certain EOC warning and error thresholds. Administrators can set these warning and error thresholds from the Settings menu.

To set EOC warning and error threshold values:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Manage Thresholds**.
4. Enter new values for the threshold values.
5. Click **Submit**.

## Customizing the Web Console Banner

The banner at the top of the SolarWinds EOC Web Console consists of two parts: an image and a background. You can customize this banner to display your logo instead of the default SolarWinds logo at the top of every web console page.

To customize the Web Console banner:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Web Console Settings**.
4. Click **Change** next to **Banner**, and complete the form.

- a. ***If you want to upload a new image to replace the SolarWinds logo***, select Upload from your computer, and click Browse to locate the image file.
- b. ***If you want to use an image from the web to replace the SolarWinds logo***, select From the web, and enter the path or URL for the image.
- c. ***If you want to upload a new image to use as the background***, select Upload from your computer, and click Browse to locate the image file.
- d. ***If you want to use an image from the web or a solid color as the background***, select Solid color, and enter the path or URL for the image, or a hex or HTML value for the solid color.
- e. Click OK.

**Notes:**

- The SolarWinds logo image is 271x49 pixels, though the banner will be automatically resized to accommodate a taller image.
- The default file path for the images folder used to store the default images is **%Program Files%\SolarWinds\EOC\Website\images**.
- The SolarWinds.com **End User License Agreement** prohibits the modification of the SolarWinds logo.

5. ***If you want to revert to the default settings***, click **Reset Defaults**.

6. Click **Submit**.

## Setting the Web Console Refresh Rate

The default refresh rate for the SolarWinds EOC Web Console is 5 minutes. You can customize this interval to make the SolarWinds EOC Web Console refresh virtually as frequently or infrequently as you would like.

To set a custom refresh rate for the Web Console:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.

3. Click **Web Console Settings**.
4. Enter a whole number value between **1** and **999** in the Page Refresh field. The refresh rate is measured in minutes.
5. *If you want to revert to the default settings*, click **Reset Defaults**.
6. Click Submit.

## Viewing Installation Details

You can view several variables about your specific installation of SolarWinds EOC right from the SolarWinds EOC Web Console. These variables include the running version of SolarWinds EOC, details about your product license, and details about your database.

### Viewing Your Version of SolarWinds EOC

Knowing the version of software you are running can help you troubleshoot issues and prepare for upgrades. All SolarWinds EOC users can view the running version of SolarWinds EOC using the SolarWinds EOC Web Console.

To view your version of SolarWinds EOC:

1. Log on to the SolarWinds EOC Web Console.
2. Scroll to the bottom of any Web Console page.
3. Note the version number next to SolarWinds Enterprise Operations Console.

### Viewing Details About Your SolarWinds EOC License

The **License details** page in the SolarWinds EOC Web Console contains important information about your SolarWinds EOC license. This information includes whether your product is a licensed or evaluation version, the number of days remaining in the evaluation period, and the number of Network Elements you are currently monitoring.

To view your License details:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **License details**.

## Viewing Details About Your SolarWinds EOC Database

SolarWinds EOC uses a Microsoft SQL Server database to store web console settings and aggregated data from your monitored SolarWinds servers. You can view information about your database on the **Database details** page in the SolarWinds EOC Web Console. This information includes details about the server software and authentication methods, and content statistics such as the number of SolarWinds servers and Network Elements being monitored, and the number of Alerts and Events currently in the database.

To view your Database details:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Database details**.

## Viewing Notifications

The **Notifications** page in the SolarWinds EOC Web Console contains notifications about mismatched custom properties between 2 or more SolarWinds servers. You can use this page to view current notifications, acknowledge notifications, and view acknowledged notifications.

To view your Notifications:

1. Log on to the SolarWinds EOC Web Console as an administrator.
2. Click **Settings**.
3. Click **Notifications**.
4. *If you want to acknowledge a notification*, click **Acknowledge** under the notification.
5. *If you want to view acknowledged notifications as well as current ones*, select **Display also acknowledged notifications** at the top of the page.

The SolarWinds EOC Web Console also displays all current and new notifications in the Notification Bar. For more information, see "Using the Web Console Notification Bar" on page 46.



## Chapter 4: Building and Importing Maps

This chapter discusses how to build maps in EOC and also how to imports maps from Orion Network Performance Monitor to EOC thus saving you time from rebuilding maps already created in Network Performance Monitor. The following topics will be discussed:

- [Building maps using Network Atlas](#)
- [Importing Maps from Orion to EOC using the Orion EOC Map Converter Tool](#)

### Building Maps Using Network Atlas

Orion Network Atlas is a powerful tool for creating custom maps and network diagrams. The maps created in Orion Network Atlas enable users to view a graphical depiction of their network in the Orion Web Console. You can also use the maps to create network documentation, which can then be printed and exported as needed. The numerous presentation options for your network maps include the following:

- A large set of predefined background colors, textures, and images is available for you to use in your maps. You can also provide your own custom background graphics.
- Real-time weather or natural disaster maps may be projected directly onto your network maps using linked web graphics as a background.
- The shape, size, color, and style of map links may be customized to illustrate the status or the relative bandwidth of associated objects.
- Map objects may be presented in a unique set of graphical styles to portray network status
- Maps may be nested to selectively reveal increasing levels of map detail, and the status of nested map child objects may be bubbled up to the parent map

For more information, see the SolarWinds Network Atlas Administrator Guide at <http://www.solarwinds.com/documentation/orion/docs/OrionNetworkAtlasAdminGuide.pdf>.

## Importing Maps From Orion to EOC

Download the Orion to EOC Map Converter from the following link:

<http://downloads.solarwinds.com/solarwinds/Release/Components/SolarWinds-OrionToEOCMapConverter-v1.5.zip>

**Note:** The EOC Map Converter tool is compatible with Orion NPM 10.4.x up to the latest release.

### PREREQUISITES

- Orion EOC must currently be managing at least one SolarWinds Orion server.
- If Orion EOC is configured to use Active Directory accounts to access Orion servers, make sure to enter the password for the AD account in the Orion Logins section of EOC. Also, only AD accounts that were individually added to the Orion Server can be used to import a map. Active Directory group accounts are not compatible with Map Converter.
- The user running this utility must:
  - a. Run Map Converter using a Windows Administrator account that also has Orion EOC Administrator role permissions.
  - b. Log into Map Converter using an Orion EOC account that was individually added to Orion EOC. Active Directory group accounts are not compatible with Map Converter.
  - c. Have Orion EOC access to at least one SolarWinds Orion server.
  - d. Have Node Management rights on the remote Orion server.

### SETTING UP

1. Copy SolarWinds-OrionToEOCMapConverter-1.5.exe to your Orion EOC server.
2. Run SolarWinds-OrionToEOCMapConverter-1.5.exe and follow the installer instructions.

3. Allow the **Users** group **Full Control** to

C:\Windows\Microsoft.NET\Framework\v2.0.50727\Temporary ASP.NET.

- a. Find the folder in Windows Explorer.
- b. Right-click the folder and then click Properties.
- c. Click the Security tab.
- d. If using Windows 2008, click Edit.
- e. Select Users in the Group or User Names list, select the Full Control check box, and then click OK.

4. Allow the **Everyone** group **Full Control** to

C:\Windows\Temp\SolarWinds\NetworkAtlas\EOC\SolarWinds\NetworkAtlas\MapsWeb\EOC\localhost and all of its child objects.

- a. Find the folder in Windows Explorer.
- b. Right-click the folder and then click **Properties**.
- c. Click the **Security** tab.
- d. *If using Windows 2008*, click **Edit**.
- e. Click **Add**.
- f. Enter **Everyone** in the **Enter the object names to select** text box, and then click **OK**.
- g. Click **Advanced**

5. Select the check box **Replace permission entries on all child objects with entries shown here that apply to child objects**, and then click **OK**.

6. Click Yes when asked to continue by a Security dialog box.

7. Select **Everyone** in the **Group or User Names** list, select the **Full Control** check box, and then click **OK**.

## IMPORTING MAPS INTO ORION EOC

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1. Log on to the Orion EOC server with a Windows Administrator account that also has Orion EOC Administrator role permissions.
2. *If using Windows Server 2008*, right-click **Start > All Programs > SolarWinds > Convert Orion maps to EOC** and click **Run as Administrator**.
3. *If using Windows Server 2003*, click **Start > All Programs > SolarWinds > Convert Orion maps to EOC**.
4. Select the Orion server hosting your maps from the Orion list.
5. Select the check boxes next to the maps you want to import into Orion EOC.
6. If you want to edit the Orion EOC names of the maps you are importing, click the map name in the **New Name** column and then edit the name.
7. Click **Import**.

**Note:** If you are importing a nested map, you must import all of the maps that reference the nested map (parent/child). Failure to migrate the referenced maps will cause EOC to show an incorrect status of the nested map.

### TROUBLESHOOTING

- Maps you import from different Orion servers may share the same name. You must rename these maps so that each has a unique name in Orion EOC. The child/parent relationships regarding any renamed map will break, and you must manually correct this after importing.
- Windows 2008 customers may encounter problems either after manually clicking the Refresh button, or after selecting a different Orion server. If the utility crashes, restart it and resume importing.
- If using an operating system such as Windows Server 2008 that has UAC, you must run the program using **Run as Administrator**.



## Chapter 5: Using the SolarWinds EOC Web Console

Users should review the following sections:

- "Supported Internet Browsers"
- "Using the Web Console Notification Bar"
- "Managing Your SolarWinds Server Credentials"
- "Viewing Consolidated SolarWinds Server Data"
- "Personalizing Views"
- "Importing Maps From Orion to EOC"

### Supported Internet Browsers

SolarWinds EOC is compatible with the following Internet browsers:

- Microsoft Internet Explorer versions 7 and higher
- Mozilla Firefox versions 4 and higher
- Google Chrome versions 20 and higher
- Apple Safari Mobile

#### Notes:

- There is a known compatibility issue with EOC and Internet Explorer 11. If you are using Internet Explorer 11 and having issues with how EOC is being displayed in your web browser, enable 'Enterprise Mode.' More information about enabling 'Enterprise Mode' can be seen [here](#).
- SolarWinds does not support administrative functions for SolarWinds EOC on Apple Safari Mobile.

## Using the Web Console Notification Bar

You are the SolarWinds administrator for your company and one of your responsibilities is the maintenance of multiple instances of Orion Network Performance Monitor. When there is an issue with your Orion server or servers, notification should be clearly visible without having to drill into multiple layers of the EOC website. The Web Console Notification Bar will provide notification of issues on the EOC home page.

Below the web console menu bar, the SolarWinds Notification Bar provides informational messages related to permissions, polling errors and other messages related to your SolarWinds servers.

For more information about any displayed Notification Bar message, navigate to the related setting or resource listed in the message, click the hyperlink imbedded in the message, or contact your EOC administrator.

To address messages in the notification bar:

- ***If you want to clear a single message***, click **Dismiss Message** next to the message you want to clear, or address the situation mentioned in that message.
- ***If you want to clear the entire notification bar***, click Close (X) on the right end of the notification bar.

Some messages in the notification bar cannot be dismissed. If the notification bar is closed and it contains one of these messages, the notification bar will reopen the next time the page refreshes. The notification bar will also reopen any time a new message appears.

## Managing Your SolarWinds Server Credentials

To manage SolarWinds server credentials if you are a user:

1. Log on to the SolarWinds EOC Web Console.
2. Click **Manage SolarWinds Server Logins**.
3. For each SolarWinds server that you want to access:
  - a. Enter the user name for the SolarWinds server.

b. Enter the password for the SolarWinds server.

4. Click **Submit**.

## Viewing Consolidated SolarWinds Server Data

The SolarWinds EOC Web Console consolidates data from SolarWinds servers and presents this network information in configurable views. You access these views from the menu bar under their respective tabs.

### Default Tabs and Related Views

The Group objects shown in the SolarWinds EOC Web Console are reported from your SolarWinds SAM or SolarWinds NPM servers. To manage these groups, log on to the appropriate SolarWinds Web Console as an administrator.

#### Default Home Tab Views

View	Information
Home	Nodes that exceed SolarWinds EOC warning and error threshold values
Groups	SolarWinds Groups data
Top 10	Network devices by utilization and by number of events
Events	Event messages in the past 24 hours
Alerts	Alerts in the past 24 hours
Traps	Traps in the past 24 hours
Syslog	Syslog messages in the past 24 hours
Reports	Monitor reports
SolarWinds Servers	Server summaries
thwack	Opens <a href="http://thwack.solarwinds.com">http://thwack.solarwinds.com</a> in a new browser window

### Default Network Tab Views







View	Information
NetFlow	NetFlow module data
VoIP	VoIP and Network Quality Manager (VNQM) data
IP SLA Manager	VNQM data related to IP SLA operations
Wireless	Wireless module data
Configs	Network Configuration Manager (NCM) data
IPAM	IP Address Manager (IPAM) data
Device Tracker	User Device Tracker (UDT) data

### Default Applications & Server Tab Views







View	Information
Applications	Server & Application Monitor (SAM) data

### Status Icons and Identifiers

The following table lists SolarWinds EOC icons with associated status indications, status types, and numerical status identifiers, proceeding from the worst.

Icon	Status Indication	Type	ID
	Node or Interface is Down (Polling request timed-out)	Error	2
	Shutdown	Error	4
	Lower Layer Down	Error	8
	Unreachable	Error	12
 	Node is in a Warning state (dropped packets or down interface)	Warning	3



	Node or Interface is Up	OK	1
	Dormant	OK	6
	Unknown	Ignore	0
	Node or Interface is Unmanaged	Ignore	9
	Interface is Unplugged but not Down	Ignore	10
	Node is defined as External (Node is not monitored by Orion NPM, but an application on the node may be monitored by Orion SAM.)	Ignore	11

## Personalizing Views

Your company is comprised of multiple IT teams which have different responsibilities within your organization. You have the task of making sure each team can view what is relevant to their job. To allow this, you must build personalized views that correlate to each team’s job description.

Users in roles that allow personalizations can customize their views by changing the layout and composition of the resources that are shown. For more information about allowing personalizations, see "Allowing and Removing View Personalizations" on page 35.

### Changing the View Layout

The following procedure walks you through changing the layout of a view.

To change the view layout:

1. Log on to the SolarWinds EOC Web Console.
2. Click the view you want to change.
3. Click **Personalize**.
4. **If you want to delete a resource from a column**, click the triangle in the top-right corner of the resource, and then click **Delete**.
5. **If you want to add a resource**, repeat the following steps for each resource you want to add.

- a. Select the resource in the Catalog Zone that you want to add.
- b. Click the column in the **Add To** list where you want the resource to appear.
- c. Click **Add**.

**Note:** It is possible to duplicate resources in the view.

6. Click **Exit Personalize**.

### **Adding Custom Links to Menu Bars and Views**

You can assign custom links to menu bars or any views in SolarWinds EOC.

#### **To add a custom link to a menu bar:**

1. Log on to the SolarWinds EOC Web Console.
2. Click **Settings**.
3. Click **Manage Menu Bars**.
4. Select the menu bar you want to edit.
5. Click **Edit Menu Bar**.
6. Click **Add**.
7. In the **Name** field, enter a display name for the link.
8. In the **URL** field, enter the address for the link.

**Note:** To link to an external webpage, include the protocol in the address. For example, to link to [www.solarwinds.com](http://www.solarwinds.com), enter **http://www.solarwinds.com**.

9. ***If you do not want the link to open in a new window or tab***, clear the check box, **Open in a New Window**.
10. Click OK.
11. Click Submit.

#### **To add a custom link to a view:**

1. Log on to the SolarWinds EOC Web Console.
2. Click **Settings**.
3. Click **Manage Views**.
4. Select the view you want to edit.
5. Click **Edit View**.
6. Click the **Resources** tab.
7. In the **Categories** menu, select **Miscellaneous**.
8. Under **Resource Name**, click **User Links**.
9. At the top of the **User Links** form, enter a title and subtitle for the resource.
10. In the **Name #1** field, enter a display name for the link.
11. In the **Url #1** field, enter the address for the link.

**Note:** To link to an external webpage, include the protocol in the address. For example, to link to [www.solarwinds.com](http://www.solarwinds.com), enter **http://www.solarwinds.com**.

12. *If you want the link to open in a new window or tab*, select Open in new window.
13. At the bottom of the **User Links** form, click **Add** and then select the appropriate column.
14. Click **OK, Save Changes**.

### Filtering and Grouping Data in Resources

You can reorganize and filter data from your SolarWinds servers within a resource if your role allows personalizations. You can group data by category, and you can filter data by SolarWinds server or by using a SQL-like filter syntax.

**Important:** All SolarWinds EOC resources use SolarWinds Query Language (SWQL) for filtering. For additional information, see "Filtering Data Using Filter Criteria" on page 43.

### **Grouping Node Data by Category**

The following procedure walks you through changing the way node data is grouped in a resource.

To group resource data by category:

1. Log on to the SolarWinds EOC Web Console.
2. Click **Edit** on the resource that you want to change.
3. Select the category that you want to group by from the **Level 0** list.
4. If you want to group by more subcategories, select additional categories from the **Level 1** and the **Level 2** lists.
5. Click **Save**.

### **Filtering Data by SolarWinds Server**

The following procedure walks you through hiding data from undesired SolarWinds servers.

To filter data by SolarWinds server:

1. Log on to the SolarWinds EOC Web Console.
2. Click **Edit** on the resource that you want to change.
3. Select check boxes next to the SolarWinds servers you want to see data from.
4. Clear the check boxes next to the SolarWinds servers you do not want to see data from.
5. Click **Save**.

### **Filtering Data Using Filter Criteria**

The following procedure explains how to limit the data a resource shows by specifying filter criteria using SolarWinds Query Language (SWQL) syntax. For additional information about SWQL syntax, see "Constructing Your Filter" on page 43.

To filter a resource using a SWQL filter:

1. Log on to the SolarWinds EOC Web Console.
2. Click **Edit** on the resource that you want to change.

3. Type your filter criteria in the **Filter Nodes SQL** field.
4. Click **Save**.

### **Constructing Your Filter**

You can filter event, interface, node, SolarWinds server, and volume data by either their built-in properties or custom properties. You can do the same for data from all of the SolarWinds servers SolarWinds EOC supports.

All of the examples and values in this section are case sensitive.

#### **Filtering by Built-in Properties**

Unlike other SolarWinds products, you have to look up two things in SolarWinds EOC to create a filter that references a built-in property:

- The SWQL alias as found in the "SWQL Resource Matrix" on page 77. The SWQL alias is a prefix that helps SolarWinds EOC locate the property values in its database.
- The property name as found in the "Built-in Properties by Data Type" tables on page 57.

When you put the SWQL alias and the property name together with a period in the middle, you form a reference to the built-in property that you can then use in your filter.

To construct a filter using a built-in property:

1. Browse the "SWQL Resource Matrix" on page 77 and find the resource you want to filter.
2. Get the alias used by the resource for the data type you want to use.
3. Get the property by browsing the "Built-in Properties by Data Type" tables on page 57.
4. Combine alias and property with a period (.) to form the fully-qualified property reference alias.property.
5. Use the fully-qualified property reference in the **Filter Nodes SQL** field for the resource.

The following table illustrates an example of this procedure using two resources with different aliases for the **EOC.Node** property. The example shows all nodes from Cisco devices.

Resource	Alias	Built-in Property	Filter Example
Global Node Status by Site	Node	Vendor	Node.Vendor = 'Cisco'
Global Top XX Errors & Discards This Hour	N	Vendor	N.Vendor = 'Cisco'

### Filtering by Custom Property

SolarWinds EOC uses different SWQL aliases in each resource for the SWIS entities they query.

To filter by custom property:

1. Determine the appropriate alias using the "SWQL Resource Matrix" on page 77.
2. Construct your filter using the following syntax:  
alias.**customProperty**.propertyName

The SWIS entities that support custom properties are:

- EOC.Interface
- EOC.Node
- EOC.Volume

If a resource does not have an alias for **EOC.Volume**, but includes an alias for **EOC.Volume.Stats**, address the volume custom property as follows:

Resource	Alias	Custom Property Syntax
Global Top XX Volumes by Disk Space Used	VS	VS.Volume.CustomProperty

Example filter to only show nodes with the custom property City that matches Atlanta:

Resource	Alias	Custom Property	Filter Example
----------	-------	-----------------	----------------

Global Node Status by Site	Node	City	Node.CustomProperty.City = 'Atlanta'
Global Top XX Errors & Discards This Hour	N	City	N.CustomProperty.City = 'Atlanta'

### **Filtering with the Wildcard Character**

The wildcard character in SWQL filters is %, as in:

**Node.Vendor Like 'Nortel%'**

### **Filtering with SWQL Operators**

SWQL uses the following operators:

Operator	Definition
>	greater than
<	less than
=	equal to
<>	not equal to
>=	greater than or equal to
<=	less than or equal to
Like	comparison operator for use with the wildcard character
AND	groups two adjacent conditions
OR	specifies either of two adjacent conditions

### **Filtering by the Status Property**

To filter by the Status property, use the following status levels:

Level	Status
0	Unknown
1	Up

2	Down
3	Warning

Example filter to only show nodes that are not Up:

**Node.Status<>1**



## Chapter 6: Built-in Properties by Data Type

The following sections list the built-in properties for each data type. The values listed are case sensitive.

The data types listed in this section are:

- "Orion Platform Data"
- "SolarWinds Server Data"

### Orion Platform Data

The following sections list the built-in properties for Orion Platform data:

- "Event Data"
- "Groups Data"
- "Interface Data"
- "Node Data"
- "SolarWinds Server Data"
- "Volume Data"

### Event Data

The following built-in properties are available for the **EOC.Event** entity:

Acknowledged	EngineID	EventID
EventTime	EventType	Message
NetObjectID	NetObjectType	NetworkNode

The following built-in properties are available for the **EOC.EventType** entity:

## Chapter 6: Built-in Properties by Data Type

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BackColor	Bold	EventType
Icon	Mute	Name
Notify	NotifyMessage	NotifySubject
Record	Sort	Sound

### Groups Data

The following built-in properties are available for the **EOC.Alert2** entity:

Acknowledged	AcknowledgedBy	AcknowledgedTime
ActiveObject	AlertDefID	AlertName
AlertTime	AlertType	CurrentValue
MachineType	NodeID	ObjectName
ObjectType		

The following built-in properties are available for the **EOC.Groups** entity:

ContainerID	Description	Frequency
LastChanged	Name	Status
StatusCalculator		

The following built-in properties are available for the **EOC.StatusInfo** entity:

Color	DefaultIconName	IconPostfix
Ranking	RollupType	ShortDescription
StatusId	StatusName	

### Interface Data

The following built-in properties are available for the **EOC.Interface** entity:

Alias	Caption	FullName
IfName	InBandwidth	InDiscardsThisHour
InDiscardsToday	InErrorsThisHour	InErrorsToday
InMcastPps	InPercentUtil	InPktSize
InPps	InUcastPps	Inbps
InterfaceID	LastChange	LastSync
MaxInBpsTime	MaxInBpsToday	MaxOutBpsTime
MaxOutBpsToday	Name	NodeID
OutBandwidth	OutDiscardsThisHour	OutDiscardsToday
OutErrorsThisHour	OutErrorsToday	OutMcastPps
OutPercentUtil	OutPktSize	OutPps
OutUcastPps	Outbps	PhysicalAddress
Severity	Speed	Status
Type	TypeDescription	TypeName

To filter a resource by any of these properties:

1. Find the resource's SWQL alias for **EOC.Interface** using the "SWQL Resource Matrix" on page 77.
2. Add the alias to the beginning of the property using the syntax:  
alias.propertyName

Example filter to show interfaces from Cisco devices:

Resource	Alias	Built-in Property	Filter Example
Global Top XX Interfaces by Traffic	I	Vendor	I.Vendor = 'Cisco'

## Node Data

The following built-in properties are available for the **EOC.Node** entity:

## Chapter 6: Built-in Properties by Data Type

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Caption	Contact	Description
DNS	GroupStatus	IOSImage
IOSVersion	IPAddress	LastSync
Location	MachineType	NodeID
ObjectSubType	Severity	Stats.AvgResponseTime
Stats.CPULoad	Stats.LastBoot	Stats.MaxResponseTime
Stats.MemoryUsed	Stats.MinResponseTime	Stats.PercentLoss
Stats.PercentMemoryUsed	Stats.ResponseTime	Stats.SystemUpTime
Status	StatusDescription	SysName
SysObjectID	TotalMemory	Vendor
VendorIcon		

To filter a resource by any of these properties:

1. Find the resource's SWQL alias for **EOC.Node** using the "SWQL Resource Matrix" on page 77.
2. Add the alias to the beginning of the property using the syntax:  
alias.propertyName

Example filter to show nodes from Nortel devices that are Down:

Resource	Alias	Built-in Property	Filter Example
Global Node Status by Site	Node	Vendor Status	Node.Vendor Like 'Nortel%' AND Node.Status=2
Global Top XX Errors & Discards This Hour	N	Vendor Status	N.Vendor Like 'Nortel%' AND N.Status=2

### SolarWinds Server Data

The following built-in properties are available for the **EOC.SWServer** entity:

---

Host	Managed	Name
PollingInterval	Status	TimeZone

To filter a resource by any of these properties:

1. Find the resource's SWQL alias for EOC.SWServer using the "[SWQL Resource Matrix](#)".
2. Add the alias to the beginning of the property using the syntax:  
alias.propertyName

## Volume Data

The following built-in properties are available for the **EOC.Volume** entity:

Caption	Description	FullName
Index	LastSync	NodeID
Responding	Size	Status
Type	VolumeID	

The following built-in properties are available for the **EOC.Volume.Stats** entity:

- PercentUsed
- SpaceAvailable
- SpaceUsed

If a resource has only one of these two Volume entities, you can reference the missing entity indirectly using the property reference alias.indirectAlias.property, where indirectAlias is:

- **Volume** for **EOC.Volume**
- **Stats** for **EOC.Volume.Stats**

The second example in the following table illustrates this.

To filter a resource by any of these properties:

1. Find the resource's SWQL alias for **EOC.Volume** or **EOC.Volume.Stats** using the "SWQL Resource Matrix" on page 77.
2. Add the alias to the beginning of the property using the syntax:  
alias.propertyName

Example filter to show volumes with captions beginning with "AX3-":

Resource	Alias	Built-in Property	Filter Example
Global Top XX Volumes by Disk Space Used	V	Caption	V.Caption Like 'AX3-%'
Hypothetical resource missing EOC.Volume	VS	Caption	VS.Volume.Caption Like 'AX3-%'

## SolarWinds Server Data

The following sections list the built-in properties for the SolarWinds servers SolarWinds EOC supports:

- "SolarWinds IPAM"
- "SolarWinds NCM"
- "SolarWinds NPM"
- "SolarWinds NTA"
- "SolarWinds SAM"
- "SolarWinds UDT"
- "SolarWinds VNQM"

### SolarWinds IPAM

The following built-in properties are available for the **EOC.IPAM.GroupNode** entity:

Address	AddressEnd	AddressMask
---------	------------	-------------

AddressN	AllocSize	AvailableCount
CIDR	Comments	DisableAutoScanning
DisableNeighborScanning	FriendlyName	GroupIconPrefix
GroupId	GroupType	GroupTypeText
HasLicenceOverflow	LastDiscovery	Location
NeighborScanAddress	NeighborScanInterval	NodeExpungeInterval
ParentId	PercentUsed	ReservedCount
RetainUserData	ScanInterval	ServerType
Status	StatusIconPostfix	StatusRanking
StatusShortDescription	StatusName	TotalCount
TransientCount	TransientPeriod	UsedCount
VLAN		

## SolarWinds NCM

The following table lists the built-in properties for SolarWinds NCM, sorted by SWIS entity.

SWIS Entity	Built-in Properties
EOC.NCM.CacheDiffResults	CacheID ComparisonType ConfigID ConfigTitle ConfigType DiffFlag NodeID
EOC.NCM.ComparisonCache	CacheID TimeStamp

## Chapter 6: Built-in Properties by Data Type

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	UserName
EOC.NCM.ConfigArchive	BaseConfigID Baseline ConfigID ConfigTitle ConfigType ModifiedTime NodeID
EOC.NCM.LatestPolicyReportViolations	Error Info ReportID Warning
EOC.NCM.Nodes	AgentIP CommandProtocol ConfigTypes EnableLevel ExecProtocol LoginStatus MachineType NodeCaption NodeID NodeGroup OSImage OSVersion ResponseError Status SysContact SysLocation



	SysName SystemOID TransferProtocol Vendor VendorIcon
EOC.NCM.PolicyReports	CacheStatus Comment Grouping LastError LastModified LastUpdated Name PolicyReportID ShowDetails ShowSummary

## SolarWinds NPM

The following table lists the built-in properties for SolarWinds NPM, sorted by SWIS entity.

SWIS Entity	Built-in Properties
EOC.Alert2	Acknowledged AcknowledgedBy AcknowledgedTime ActiveObject AlertDefID AlertName AlertTime

	<p>AlertType                  CurrentValue                  MachineType                  NodeID                  ObjectName                  ObjectType</p>
EOC.AlertDefinition	<p>AlertDefID                  BlockUntil                  Description                  DOW                  Enabled                  EndTime                  ExecuteInterval                  LastError                  LastErrorTime                  LastExecuteTime                  Name                  ObjectType                  ResetQuery                  ResetQueryDesign                  ResetSustained                  ResponseTime                  StartTime                  SuppressionQuery                  SuppressionQueryDesign                  TriggerQuery                  TriggerQueryDesign                  TriggerSustained</p>

---

EOC.AlertStatus	ActiveObject Acknowledged AcknowledgedBy AcknowledgedTime AlertDefID AlertMessage AlertNotes LastUpdate ObjectName ObjectType ResetTimeStamp State TriggerCount TriggerTimeOffset TriggerTimeStamp WorkingState
EOC.SysLog	Acknowledged DateTime EngineID FirstIPInMessage Hostname IPAddress MacInMessage Message MessageID MessageType SecIPInMessage SysLogFacility

	SysLogSeverity SysLogTag TimeStamp
EOC.SysLogFacility	FacilityCode FacilityName
EOC.SysLogSeverity	SeverityCode SeverityName
EOC.Trap	Acknowledged ColorCode Community DateTime EngineID Hostname IPAddress NodeID Tag TimeStamp TrapID TrapType
EOC.TrapVarbind	OID OIDName OIDValue RawValue TrapID TrapIndex
EOC.Wireless.Client	Available ClientID

	ESSID FirstUpdate InterfaceID IPAddress LastUpdate MAC Name NodeID NPMNodeID OriginalID OrionLink RecordID SignalQuality SignalStrength Status TotalBytesRxPerSec TotalBytesTxPerSec UnManaged UpTime
EOC.Wireless.Interface	Clients InterfaceID NodeID

## SolarWinds NTA

The following table lists the built-in properties for SolarWinds NTA, sorted by SWIS entity.

SWIS Entity	Built-in Properties
-------------	---------------------

EOC.NetFlow.Engine	FlowCollectorKeepAlive NetFlowPort ServerName
EOC.NetFlow.Source	Enabled InterfaceID LastTime

### SolarWinds SAM

The following table lists the built-in properties for SolarWinds SAM, sorted by SWIS entity.

SWIS Entity	Built-in Properties
EOC.APM.Application	ApplicationID ApplicationTemplateID Name NodeID
EOC.APM.ApplicationTemplate	ApplicationTemplateID Name
EOC.APM.ApplicationWebUri	ApplicationID NodeID WebUri
EOC.APM.Component	ApplicationID ComponentID ComponentType Name TemplateID
EOC.APM.ComponentWebUri	ApplicationID ComponentID

	WebUri
EOC.APM.CurrentApplicationStatus	ApplicationID Availability LastTimeUp TimeStamp
EOC.APM.CurrentComponentStatus	ApplicationID Availability ComponentID ComponentStatusID LastTimeUp TimeStamp
EOC.APM.CurrentStatistic	ApplicationAvailability ApplicationID ComponentAvailability ComponentErrorCode ComponentID ComponentMemoryUsed ComponentName ComponentPercentCPU ComponentPercentMemory ComponentPercentVirtualMemory ComponentPortNumber ComponentProcessName ComponentResponseTime ComponentType ComponentVirtualMemoryUsed InstanceCount NodeID

### SolarWinds UDT

The following table lists the built-in properties for SolarWinds UDT, sorted by SWIS entity.

SWIS Entity	Built-in Properties
EOC.UDT.NodeCapability	AddedManually Capability Enabled LastScan LastSuccessfulScan NodeID Options PollingIntervalMinutes
EOC.UDT.NodeStatistics	ActivePortCount NodeID PortCount PortPercentUsed PortsAvailable

### SolarWinds VNQM

The following table lists the built-in properties for SolarWinds VNQM (formerly IP SLA), sorted by SWIS entity.

SWIS Entity	Built-in Properties
EOC.IpSla.Event	EventTypeID
EOC.IpSla.Operation	DateChangedUtc Deleted Description



	DisplaySource DisplayTarget Frequency IpSlaOperationNumber IsAutoConfigured LifeTimeUtc NodeID OperationInstanceID OperationName OperationResultID OperationStateID OperationStatusID OperationTypeID SourceNodeID StatusMessage TargetNodeID
EOC.IpSla.OperationCurrentStat	DnsRtt HttpRtt Jitter JitterDS JitterSD Latency MOS OneWayDelayDS OneWayDelaySD OperationInstanceID OperationResultID PacketLoss

## Chapter 6: Built-in Properties by Data Type

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	PacketLossDS PacketLossSD RecordTime RoundTripTime TcpConnectRtt TransactionRtt
EOC.IpSla.OperationStatus	OperationStatus OperationStatusID
EOC.IpSla.OperationType	MinlosVersionSupport OperationType OperationTypeID
EOC.IpSla.Site	IPAddress IsAutoConfigured IsHub Name NodeID SiteID
EOC.Voip.CCMMonitoring	BlockUntil CCMType LastExecuteTime NodeID
EOC.Voip.CCMStatistic	ActiveGateways ActivePhones InactiveGateways InactivePhones NodeID RecordTime

	RejectedGateways RejectedPhones
EOC.Voip.Engine	KeepAlive ServerName
EOC.Voip.InfrastructureInterface	InterfaceID
EOC.Voip.InfrastructureNode	NodeID
EOC.Voip.Link	DestNodeID DestVoipSiteID IpSlaOperationNum SourceNodeID SourceVoipSiteID Status VoipLinkTestResultID
EOC.Voip.LinkTestResults	HasCallSetupOperation HasUdpJitterOperation VoipLinkTestResultsID VoipTestInstanceID
EOC.Voip.Site	BlockUntil IsAutoConfigured IsHub LastExecuteTime Name VoipSiteID
EOC.Voip.TestInstance	DestNodeID IpSlaOperationNum SourceNodeID Status

## Chapter 6: Built-in Properties by Data Type

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	VoipTestID VoipTestInstanceID
EOC.Voip.UdpResultDetail	Jitter Latency MOS PacketLoss RecordTime VoipLinkTestResultID



## Chapter 7: SWQL Resource Matrix

This resource matrix helps you find the SWQL aliases you need to create filter criteria for your resources. The following tables are organized by resource type.

- [Alert Resources](#)
- [Event Resources](#)
- [Inventory Resources](#)
- [Group Resources](#)
- [SolarWinds EOC Resources](#)
- [SolarWinds IPAM Resources](#)
- [SolarWinds NCM Resources](#)
- [SolarWinds NTA Resources](#)
- [SolarWinds SAM Resources](#)
- [SolarWinds UDT Resources](#)
- [SolarWinds VNQM \(IP SLA\) Resources](#)
- [SolarWinds WPM Resources](#)
- [Summary Reports Resources](#)
- [SysLog Resources](#)
- [Trap Resources](#)
- [Wireless Resources](#)

### Alert Resources

Resource	SWIS Entity Name	SWQL Alias
Global Last XX Active Alerts	EOC.Alert2	Alert
	EOC.Node	Node
	EOC.Node.CustomProperty	Node.CustomProperty

	EOC.Orion	SWServer
Triggered Alerts for All Network Devices	EOC.Alert2 EOC.Node EOC.Node.CustomProperty EOC.Orion	Alert Node NodeCustomProperty SWServer

## Events Resources

Resource	SWIS Entity Name	SWQL Alias
Global Events Summary	EOC.Event	Event
	EOC.EventType	EventType
	EOC.Orion	SWServer
Global Last XX Events	EOC.Event	Event
	EOC.EventType	EventType
	EOC.Node	Node
	EOC.Orion	SWServer

## Inventory Resources

Resource	SWIS Entity Name	SWQL Alias
Number of Interfaces by Type	EOC.Interface	I
	EOC.Orion	SWServer
Number of Nodes by Device Type	EOC.Node	Node
	EOC.Orion	SWServer
Number of Nodes by IOS/OS	EOC.Node	Node
	EOC.Orion	SWServer

## Groups Resources

Resource	SWIS Entity Name	SWQL Alias
Global Active Group Alerts	EOC.Alert2	Alert
	EOC.Orion	SWServer
Global All Groups	EOC.Groups	Groups
	EOC.Orion	SWServer
	EOC.StatusInfo	StatusInfo
Global Groups With Problems	EOC.Groups	Groups
	EOC.Orion	SWServer

## SolarWinds EOC Resources

Resource	SWIS Entity Name	SWQL Alias
Global Top XX Errors & Discards This Hour	EOC.Interface	I
	EOC.Node	N
	EOC.Orion	SWServer
Global Top XX Error & Discards Today	EOC.Interface	I
	EOC.Node	N
	EOC.Orion	SWServer
Global Top XX Interfaces by percent utilization	EOC.Interface	I
	EOC.Node	N
	EOC.Orion	SWServer
Global Top XX Interfaces by Relative Multicast Packet Rate	EOC.Interface	I
	EOC.Node	N
	EOC.Orion	SWServer
Global Top XX Interfaces by Traffic	EOC.Interface	I

## Chapter 7: SWQL Resource Matrix

	EOC.Node EOC.Orion	N SWServer
Global Top XX Nodes by Average Response Time	EOC.Node EOC.Orion	Node SWServer
Global Top XX Nodes by CPU Load	EOC.Node EOC.Orion	Node SWServer
Global Top XX Nodes by Current Response Time	EOC.Node EOC.Orion	Node SWServer
Global Top XX Nodes by Percent Memory Used	EOC.Node EOC.Orion	Node SWServer
Global Top XX Nodes by Percent Packet Loss	EOC.Node EOC.Orion	Node SWServer
Global Top XX Volumes by Disk Space Used	EOC.Node EOC.Orion EOC.Volume EOC.Volume.Stats	N SWServer V VS

## SolarWinds IPAM Resources

Resource	SWIS Entity Name	SWQL Alias
Global Top XX DHCP Scopes by Utilization	EOC.IPAM.GroupNode EOC.Orion	Scope SWServer
Global Top XX Subnets By % IP Address Used	EOC.IPAM.GroupNode EOC.Orion	Subnet SWServer



## SolarWinds NCM Resources

Resource	SWIS Entity Name	SWQL Alias
Global Configuration Manager Nodes	EOC.NCM.Nodes	NCMNode
	EOC.Node	Node
	EOC.Orion	SWServer
Global Devices Backed Up vs Not Backed Up	EOC.NCM.ConfigArchive	ConfigArchive
	EOC.NCM.Nodes	NCMNode
	EOC.Node	Node
Global Last XX Config Changes	EOC.Orion	SWServer
	EOC.NCM.CacheDiffResults	CacheDiffResults
	EOC.NCM.ComparisonCache	ComparisonCache
	EOC.NCM.Nodes	NCMNode
Global Policy Violations For Each SolarWinds Server	EOC.Node	Node
	EOC.Orion	SWServer
	EOC.NCM.LatestPolicyReportViolations	LPR
	EOC.NCM.PolicyReports	PR
	EOC.Orion	O

## SolarWinds NTA Resources

Resource	SWIS Entity Name	SWQL Alias
Global Last XX Traffic Analysis Events	EOC.EventType	EventType
	EOC.Node	Node
	EOC.Orion	SWServer
Global NetFlow Sources	EOC.Interface	I
	EOC.Interface	I1
	EOC.NetFlow.Source	S

	EOC.NetFlow.Source	S1
	EOC.Node	N
	EOC.Node	N1
	EOC.Orion	SWServer
NetFlow Collector Services	EOC.NetFlow.Engine	S
	EOC.Orion	SWServer

## NetFlow Traffic Analyzer SWQL Queries:

### Top XX Apps:

- F.ApplicationName
- F.MapTo --> string [portnumber (multiport for unmonitored)]
- Orion. --> for orion server related variables

### Top XX Countries:

- F.CountryCode
- F.CountryName

### Top XX Protocols:

- F.ProtocolID
- F.ProtocolName

### Top XX Endpoints:

- F.HostName

### Top XX Conversations:

- F.SourceIP
- F.SourceHostname
- F.DestinationIP
- F.DestinationHostname

## SolarWinds SAM Resources

Resource	SWIS Entity Name	SWQL Alias
Global All Applications	EOC.APM.Application EOC.APM.ApplicationTemplate EOC.APM.CurrentApplicationStatus EOC.Node EOC.Node.CustomProperty EOC.Orion	A AT CAS N NodeCustomProperty SWServer
Global Application Health Overview	EOC.APM.Application EOC.APM.CurrentApplicationStatus EOC.Node EOC.Orion	Application Status Node SWServer
Global Applications by Status	EOC.APM.Application EOC.APM.ApplicationTemplate EOC.APM.CurrentApplicationStatus EOC.Node EOC.Node.CustomProperty EOC.Orion	A AT CAS N NodeCustomProperty SWServer
Global Applications with High Process CPU Load	EOC.APM.Application EOC.APM.ApplicationTemplate EOC.APM.CurrentApplicationStatus EOC.Node EOC.Orion	A AT CAS N SWServer
Global Applications with High Process Memory Used	EOC.APM.Application EOC.APM.CurrentApplicationStatus EOC.APM.CurrentStatistic EOC.Node	A CAS CS N

## Chapter 7: SWQL Resource Matrix

	EOC.Orion	SWServer
Global Applications with High Response Time	EOC.APM.Application EOC.APM.CurrentApplicationStatus EOC.APM.CurrentStatistic EOC.Node EOC.Orion	A CAS CS N SWServer
Global Applications with Problems	EOC.APM.Application EOC.APM.ApplicationTemplate EOC.APM.CurrentApplicationStatus EOC.Node EOC.Orion	A AT CAS N SWServer
Global Top XX Components by Response Time	EOC.APM.Application EOC.APM.Component EOC.APM.CurrentComponentStatus EOC.APM.CurrentStatistic EOC.Node EOC.Orion	A Monitor CCS CS N SWServer
Global Top XX Monitored Processes by CPU Load	EOC.APM.Application EOC.APM.CurrentComponentStatus EOC.APM.CurrentStatistic EOC.Node EOC.Orion	A CCS CS N SWServer
Global Top XX Monitored Processes by Physical Memory	EOC.APM.Application EOC.APM.CurrentComponentStatus EOC.APM.CurrentStatistic EOC.Node EOC.Orion	A CCS CS N SWServer

Global Top XX Monitored Processes by Virtual Memory	EOC.APM.Application	A
	EOC.APM.CurrentComponentStatus	CCS
	EOC.APM.CurrentStatistic	CS
	EOC.Node	N
	EOC.Orion	SWServer
Total Applications By Type for Each Local SolarWinds Server	EOC.APM.ApplicationTemplate	AT
	EOC.Orion	SWServer

## SolarWinds UDT Resources

Resource	SWIS Entity Name	SWQL Alias
Global Total Ports Currently Used	EOC.Orion	SWServer
Top XX Nodes by Percent Ports Used	EOC.Node	N
	EOC.Orion	SWServer
	EOC.UDT.NodeCapability	S
	EOC.UDT.NodeStatistics	NS

## SolarWinds VNQM (IP SLA) Resources

Resource	SWIS Entity Name	SWQL Alias
Global Active IP SLA Operation Alerts	EOC.AlertDefinition	AlertDefinition
	EOC.AlertStatus	AlertStatus
	EOC.IpSla.Operation	IpSlaOperation
	EOC.IpSla.OperationType	IpSlaOperationType
	EOC.Orion	SWServer
Global All IP SLA	EOC.AlertStatus	AlertStatus

## Chapter 7: SWQL Resource Matrix

Operations	EOC.AlertDefinition EOC.IpSla.Operation EOC.IpSla.OperationStatus EOC.IpSla.OperationType EOC.IpSla.Site EOC.IpSla.Site EOC.Node EOC.Orion	AlertDefinition IpSlaOperation ipSlaOperationStatus IpSlaOperationType SourceSite TargetSite Node SWServer
Global Last XX IP SLA Events	EOC.Event EOC.IpSla.Event EOC.Orion	Event IpSlaEvent SWServer
Global Top XX All Operations	EOC.IpSla.Operation EOC.IpSla.OperationCurrentStat EOC.IpSla.OperationStatus EOC.IpSla.OperationType EOC.IpSla.Site EOC.IpSla.Site EOC.Node EOC.Node EOC.Orion	IpSlaOperation IpSlaOperationCurrentStat IpSlaOperationStatus IpSlaOperationType SourceSite TargetSite SourceNode TargetNode SWServer
Global Top XX Call Paths by Jitter	EOC.Node EOC.Node EOC.Orion EOC.Voip.Link EOC.Voip.Site EOC.Voip.Site EOC.Voip.UdpResultDetail	N1 N2 SWServer L S1 S2 D

Global Top XX Call Paths by Latency	EOC.Node EOC.Node EOC.Orion EOC.Voip.Link EOC.Voip.Site EOC.Voip.Site EOC.Voip.UdpResultDetail	N1 N2 SWServer L S1 S2 D
Global Top XX Call Paths by MOS	EOC.Node EOC.Node EOC.Orion EOC.Voip.Link EOC.Voip.Site EOC.Voip.Site EOC.Voip.UdpResultDetail	N1 N2 SWServer L S1 S2 D
Global Top XX Call Paths by Packet Loss	EOC.Node EOC.Node EOC.Orion EOC.Voip.Link EOC.Voip.Site EOC.Voip.Site EOC.Voip.UdpResultDetail	N1 N2 SWServer L S1 S2 D
Global Top XX VoIP Call Paths	EOC.Node EOC.Node EOC.Orion EOC.Voip.Link EOC.Voip.Site EOC.Voip.Site EOC.Voip.UdpResultDetail	N1 N2 SWServer L S1 S2 D

## Chapter 7: SWQL Resource Matrix

Global VoIP Call Managers	EOC.Node EOC.Orion EOC.Voip.CCMStatistic	N SWServer C
Global VoIP Collector Services	EOC.Orion EOC.Voip.Engine	SWServer S
Global VoIP Sites Overview	EOC.IpSla.Operation EOC.IpSla.OperationCurrentStat EOC.IpSla.OperationStatus EOC.IpSla.Site EOC.Node EOC.Orion	L D OperationStatus S Node SWServer

## SolarWinds WPM Resources

Resource	SWIS Entity Name	SWQL Alias
Global All Locations	EOC.SEUM.Agent EOC.Orion	A O
Global All Transactions	EOC.SEUM.Transaction EOC.Orion	T O
Global Steps With Problems	EOC.SEUM.TransactionStep EOC.Orion EOC.SEUM.Transaction EOC.StatusInfo EOC.StatusInfo	TS O T s s2
Global Top XX Steps by Duration	EOC.SEUM.TransactionStep EOC.Orion	TS O



Global Top XX Transactions by Duration	EOC.SEUM.Transaction EOC.Orion	T O
Global Transaction Health Overview	EOC.SEUM.Transaction EOC.Orion EOC.StatusInfo	T O S
Global Transactions With Problems	EOC.SEUM.Transaction EOC.Orion EOC.StatusInfo	T O S

## Summary Report Resources

Resource	SWIS Entity Name	SWQL Alias
Global Down Interface	EOC.Interface EOC.Node EOC.Orion	I Node SWServer
Global Down Nodes	EOC.Node EOC.Orion	Node SWServer
Global High Errors & Discards Today	EOC.Interface EOC.Node	I N
Global Node Status by Site	EOC.Node EOC.Node.CustomProperty EOC.Orion	Node NodeCustomProperty SWServer
Global Nodes with High CPU Load	EOC.Node EOC.Orion	Node SWServer
Global Nodes with High Memory Utilization	EOC.Node EOC.Orion	Node SWServer
Global Nodes with High Packet Loss	EOC.Node EOC.Orion	Node SWServer

## Chapter 7: SWQL Resource Matrix

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Global Nodes with High Response Time	EOC.Node EOC.Orion	Node SWServer
Global Top XX Nodes with Problems	EOC.Node EOC.Node.CustomProperty EOC.Orion	Node NodeCustomProperty SWServer
Global Volumes with High Percent usage	EOC.Node EOC.Orion EOC.Volume	N SWServer V
SolarWinds Servers Summary Statistics	EOC.Orion	SWServer

## SysLog Resources

Resource	SWIS Entity Name	SWQL Alias
SysLog Messages from All Network Devices	EOC.Node	Node
	EOC.Orion	SWServer
	EOC.SysLog	SysLog
	EOC.SysLogFacility	SysLogFacility
	EOC.SysLogSeverity	SysLogSeverity
Syslog Summary	EOC.Orion	SWServer
	EOC.SysLog	SysLog

## Trap Resources

Resource	SWIS Entity Name	SWQL Alias
Global Trap Resource	EOC.Orion	SWServer
	EOC.Trap	Trap

Traps from All Network Devices	EOC.Node	Node
	EOC.Orion	SWServer
	EOC.Trap	Trap
	EOC.TrapVarbind	TrapVarBind

## Wireless Resources

Resource	SWIS Entity Name	SWQL Alias
Global Wireless Clients	EOC.Node	N
	EOC.Orion	SWServer
	EOC.Wireless.Interface	WI
Global Top XX Wireless APs by Client Count	EOC.Node	N
	EOC.Orion	SWServer
	EOC.Wireless.Interface	WI
Global Top XX Wireless Clients by Traffic	EOC.Node	N
	EOC.Orion	SWServer
	EOC.Wireless.Client	WC

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